

Notice of Allowability

Application No.

09/822,454

Applicant(s)

BIRRU, DAGNACHEW

Examiner

Lawrence B Williams

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 26 August 2004.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 1.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 1.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Aaron Waxler on 22 September 2004.

The application has been amended as follows:

a.) In claim 1, make the following changes:

At step b) line 2, replace H with (H).

At step d) line 3, replace the phrase "frequency-domain information A" with the phrase "frequency-domain representation (A)".

In lines 3 and 4, replace "said channel estimate H" with "estimated frequency response transfer function (H)". Also replace A/H in line 4 with (A)/(H).

At step e) line 1 change A/H to (A)/(H).

b.) In claim 2, make the following changes:

At step a) line 1, replace G with (G). Also in line 2, change "channel estimate H" to "estimated frequency response transfer function (H)". In line 3, change F to (F).

At step b) line 1, delete "of". In line 2, change F to (F).

c.) In claim 3, make the following changes:

Art Unit: 2634

In line 3, change G' to (G') .

In line 5, replace “said linear inverse channel estimate” with “said linear inverse frequency response estimate”. Also in line 6, replace “channel estimate H” with “estimated frequency response transfer function (H)”.

d.) In claim 4, make the following changes:

In line 6, replace G' with (G') .

e.) In claim 10, make the following changes:

At step c), line 3, replace “channel estimate H” with “estimated frequency response transfer function (H)”.

At step d), line 1, replace G with (G).

At step e) line 1, replace F with (F).

At step f) line 2, replace F with (F). Also in line 3 delete the phrase “F and G”.

f.) In claim 12, make the following changes:

In line 3, replace “ G' ” with “ (G') ”.

In line 5, replace “said linear inverse channel estimate” with “said linear inverse frequency response estimate”. Also in line 6, replace “channel estimate H” with “estimated frequency response transfer function (H)”.

g.) In claim 13, make the following changes:

Art Unit: 2634

In line 2, delete the phrase “”performed on said channel transfer function H”.

In line 3, delete the phrase “of said channel”.

In line 4, replace “G” with “(G)”.

In line 12, replace “A” with (A).

In lines 12-13, replace “channel estimate H to obtain A/H” with “estimated frequency response transfer function (H) to obtain (A)/(H)”.

In line 14, replace “A/H” with (A)/(H).

In line 20, replace the phrase “FD equalizer taps G” with “FD equalizer taps (G).”

h.) In claim 14, make the following changes:

In line 2, replace “F” with (F).

In line 5, replace “G” with (G). Also replace the phrase “channel estimate H” with the phrase “estimated frequency response transfer function (H)”.

In line 6, replace “F” with “(F)”.

In the abstract, make the following changes:

a.) In line 5, replace the phrase “where G is the forward FD equalizer taps, F is” with “where (G) is the forward FD equalizer taps, (F) is”.

b.) In line 6, replace “H” with “(H)”.

DRAWINGS

2. The drawings were received on 26 August 2004. These drawings are approved for incorporating a label for item 40 in Fig. 2.

REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance: The instant application discloses a method for initializing the filter coefficients of a hybrid frequency-time domain adaptive equalizer device. A thorough search of prior art records has failed to teach a method comprising the steps of: e) performing an IPFT of (A)/(H) to obtain a time domain representation of the FD equalizer taps and eliminating presence of a predetermined number of taps of said time domain representation of the FD equalizer; and, f) performing a FFT of the resulting time domain representation of FD equalizer to obtain frequency domain representation of FD equalizer taps (G), whereby said obtained taps are used to initialize the forward FD filter of said hybrid equalizer " along with the remaining limitations of claims 1 and 10.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2634

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw
September 22, 2004


AMANDA T. LE
PRIMARY EXAMINER